CLAIMS

1. Method of controlling data traffic in a telecommunications network (150) using a statistical model (D-BIND, S-BIND) of the traffic transmitted by the network (150) and a Gaussian distribution of the data bit rate, in which method a value (μ, σ) characteristic of said Gaussian distribution is weighted by a parameter γ varying as a function of the intensity of the variations, also known as the burstiness, of the traffic processed by the network (150) and said weighted value (μ', σ) is used to evaluate the traffic in the network, which method is characterized in that the weighting parameter γ is defined by means of an average value λ_{avg} of the data bit rate and a maximum value λ_{peak} of the data bit rate over a given period.

2. Method according to claim 1 characterized in that the weighting parameter γ is defined as the ratio of the average value λ_{avg} of the data bit rate to the maximum value λ_{peak} of the data bit rate:

$$\gamma = \frac{\gamma_{avg}}{\gamma_{peak}}$$

3. Method according to claim 1 or claim 2 characterized in that the average value λ_{avg} of the data bit rate is measured over a predetermined period during which the maximum value λ_{peak} of the data bit rate is determined.

4. Method according to claim 2 or claim 3 characterized in that the average value μ of the Gaussian distribution is weighted, for example by means of a formula such as:

$$\mu' = (1 - \gamma)(\mu - \lambda_{avg}) + \lambda_{avg}$$

5. Method according to any one of the preceding claims characterized in that a model of the data traffic is used involving pairs of values

$$\{(R_k, I_k) \mid k = 1,\ldots,p\}$$

in which I_k is a interval, p is a variable generally having a value from 4 to 8 and R_k is the maximum data bit rate that a given data stream can send during that interval I_k such that, the maximum data bit rate R_k for the stream j is defined as follows:

$$R_k = max_{0 \le t} \left(\frac{A_j[t,\ t + I_k]}{I_k} \right)$$

where $A_j[t_1, t_2]$ represents the total number of bits sent by the data stream (j) concerned between the times t_1 and t_2.

6. Method according to claim 5 characterized in that a data stream is modeled by a series of positive real numbers

$$\{X_{t1}, X_{t2},...,X_{tN}\}$$

obtained from a function $b(t)$ generated by means of pairs of values $\{(R_k, l_k) \mid k = 1,...p\}$, for example in accordance with a formula such as:

$$b(t) = \frac{R_k l_k - R_{k-1} l_{k-1}}{l_k - l_{k-1}}(t - l_k) + R_k l_k, \quad l_{k-1} \leq t \leq l_k$$

7. Method according to claim 6, characterized in that a confidence level ε is defined using a random variable S_k specific to the distribution of the data stream bit rate concerned during an interval l_k by associating with it a probability density function $s_k(a)$ defined as follows:

$$S_k(a) = prob\left(\frac{A_j[t, t + l_k]}{l_k} \leq a\right), \quad \forall t \geq 0$$

and then defining the value R_k for each interval l_k as follows:

$$\int_0^{R_k} S_k(t)\,dt = \varepsilon$$

where $0 < \varepsilon \leq 1$.

8. Method according to any one of the preceding claims characterized in that data traffic control is used to decide whether to admit into the network a data stream relating, for example, to multimedia information such as a conversation, a videoconference, a picture and/or a sequence of pictures coded in accordance with the MPEG protocol, for example.

9. Device for controlling data traffic in a telecommunications network (150) using a statistical model (D-BIND, S-BIND) of the traffic transmitted by the network (150) and a Gaussian distribution of the data bit rate, which device is characterized in that it comprises means for executing a method according to any one of the preceding claims to weight a value (μ, σ) characteristic of said Gaussian distribution by a parameter γ varying as a function of the intensity of the variations, also known as the burstiness, of the traffic processed by the network (150) and said weighted value (μ', σ) is used to evaluate the traffic in the network.